IN THE CLAIMS

Claims 1-26 are canceled without prejudice or disclaimer of the subject matter thereof.

Please add new claims 27-63 as follows:

27. An isolated nucleic acid molecule encoding a protein having an amino acid sequence selected from the group consisting of SEQ ID NO:2 and variants of SEQ ID NO:2 wherein said protein exhibits resistance to a proteinase inhibitor (PI) from Nicotiana alata.

28. The isolated nucleic acid molecule of Claim 27 wherein the nucleotide sequence encodes an amino acid sequence having at least 90% sequence identity to SEQ ID NO:2 after optimal alignment.

29. The isolated nucleic acid molecule of Claim 27 wherein the nucleotide sequence encodes an amino acid sequence set forth in SEQ ID NO:2.

30. The isolated nucleic acid molecule of Claim 27 wherein the nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of SEQ ID NO:4 and SEQ ID NO:6.

31. The isolated nucleic acid molecule of Claim 27 wherein said variant includes an N-terminal signal sequence comprising an amino acid sequence SEQ ID NO:3 or an amino acid sequence having at least 90% sequence identity to SEQ ID NO:3 after optimal alignment.

32. The isolated nucleic acid molecule of Claim 31 wherein the nucleotide sequence comprises SEQ ID NO:5.

33. The isolated nucleic acid molecule of Claim 27 wherein said protein variant comprises an amino acid other than arginine at position 192.

34. The isolated nucleic acid molecule of Claim 33 wherein the variant comprises a glutamine at position 192.

35. A vector comprising a nucleic acid molecule of Claim 27.

36. The vector of Claim 35 wherein the vector is an expression vector.

37. The vector of Claim 36 wherein the expression vector is operable in a prokaryotic cell.

38. The vector of Claim 36 wherein the expression vector is operable in a eukaryotic cell.

39. The vector of Claim 38 wherein the eukaryotic cell is an insect cell.

40. The vector of Claim 39 wherein the vector is a baculovirus vector.

41. A genetically modified cell comprising a nucleic acid molecule of Claim 27.

42. The genetically modified cell of Claim 41 wherein the cell is a prokaryotic cell.

43. The genetically modified cell of Claim 41 wherein the cell is a eukaryotic cell.

44. A method for modulating expression of a nucleic acid molecule of Claim 27 in an insect, said method comprising contacting said nucleic acid molecule with an effective amount of an agent for a time and under conditions sufficient to decrease or increase the expression of said nucleic acid molecule.

45. An isolated protein having an amino acid sequence selected from the group consisting of SEQ ID NO:2 or a variant thereof, wherein said protein exhibits resistance to a PI from N. alata.

46. The protein of claim 45 wherein said amino acid sequence comprises an amino acid sequence having at least 90% similarity to SEQ ID NO : 2 after optimal alignment.

47. The protein of Claim 45 encoded by a nucleotide sequence selected from the group consisting of SEQ ID NO:4 and SEQ ID NO:6.

48. The protein of Claim 45 wherein the variant is an N-terminal signal sequence.

49. The protein of Claim 48 wherein the signal sequence comprises an amino acid sequence as set forth in SEQ ID NO:3.

50. The protein of Claim 45 wherein said variant comprises an amino acid other than arginine at position 192.

51. The isolated chymotrypsin of Claim 50 wherein said variant comprises a glutamine at position 192.

52. An antagonist of a protein of Claim 45.

53. The antagonist of Claim 52 wherein the antagonist binds or interacts with the chymotrypsin at or near amino acid residue position 192.

54. The antagonist of Claim 52 wherein said antagonist is PotI.

55. A genetically modified plant comprising cells capable of producing an antagonist of a protein of Claim 45.

56. The genetically modified plant of Claim 55 wherein the plant is a monocotyledonous plant.

57. The genetically modified plant of Claim 55 wherein the plant is a dicotyledonous plant.

58. The genetically modified plant of Claim 55 wherein the plant products PotI.

59. The genetically modified plant of Claim 55 wherein the plant is cotton, sweet corn, tomato, tobacco, pimento, potato, sunflower, citrus, plums, sorghum, leeks, soybean, alfalfa, beans, pigeon peas, chick peas, artichokes, curcurbits, lettuce, Dianthus, geraniums, cape gooseberry, maize, flax and linseed, lupins, broad beans, garden peas, peanuts, canola, snapdragons, cherry, pot marigolds, Helichrysum (an ornamental plant), wheat, barley, oats, triticale, carrots, onions, orchids, roses and petunias.

60. The genetically modified plant of Claim 55 wherein the plant is a cotton plant.

61. The genetically modified plant of Claim 55 comprising a nucleic acid molecule encoding PotlA and/or PotlB.

62. Seeds or other reproduction material from the plant of Claim 55.

63. A method for modulating activity of a protein of Claim 45 in an insect, said method comprising contacting said protein with an effective amount of an agent for a time and under conditions sufficient to decrease or increase the activity of said protein.